ASSESS THE PULMONARY FUNCTIONAL PARAMETERS AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE ADMITTED IN SELECTED HOSPITAL, LUCKNOW

Mr. Silambarasan R* | Dr. Dipika R Rao**

**Research Scholar, Himalayan University, Itanagar, Arunachal Pradesh, India.*

***Research Supervisor, Himalayan University, Itanagar, Arunachal Pradesh, India.*

DOI: http://doi.org/10.47211/trr.2023.v09i01.010

ABSTRACT

Chronic Obstructive Pulmonary Disease (COPD) is caused by long-term exposure to irritating gases or particulate matter, most often from cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer, and avariety of other conditions. It is a crucial health issue and ranks fifth in the global burden of disease. The research approach used in this study was a quantitative evaluative research approach. The research design used in this study was quasi-experimental design (i.e.) two group pre and post-test design. The study was conducted at Selected Medical College Hospital, Lucknow. It consists of all patients admitted with COPD. The sample size for this study was 600 between the age group of 35 – 75 years. Samples were selected based on the purposive sampling technique.

Key Words: *Chronic Obstructive Pulmonary Disease (COPD), cigarette smoke, risk of developing heart disease.*

ABOUT AUTHORS:

Author, Mr. Silambarasan R is Research Scholar in Himalayan University, Itanagar, Arunachal Pradesh, India.

Author, Dr. Dipika R Rao is Research Supervisor at Himalayan University, Itanagar, Arunachal Pradesh, India.

INTRODUCTION

Chronic Obstructive pulmonary Disease is a major cause of ill health globally. COPD is found to be one of the most distressful conditions badly affecting human life. The disease is characterized by an abnormal inflammatory response in the lungs and restricted airflow. Every six seconds people with serious respiratory disease are reminded that their breathing is impaired and they cannot enjoy life as they used to as their activities are restricted and that their lives may not be as long. (Singh D et al 2019)

As exacerbations of chronic obstructive pulmonary disease (COPD) significantly worsen patients' health status and increase disease-related mortality, greater control of exacerbations has important implications for improving patients' health and survival. The incremental benefits of pharmacologic therapies in preventing COPD exacerbations remain unclear. The objective of this observational study was to examine the risk of COPD-related exacerbations between groups of patients receiving inhaled corticosteroids (ICS), anticholinergics (AC), long-acting β_2-agonists (LABA), or fixed-dose combinations of ICS and LABA. (Dong-Churl Suh et al 2010)

Pulmonary rehabilitation should be part of the treatment plan for any chronic lung disease. It's a combination of exercise, breathing techniques, diet, and education that aim to give patients a better quality of life and be able to have more control of their symptoms. Pulmonary rehabilitation is aimed to improve the quality of life by decreasing respiratory symptoms and complications.

RESEARCH METHODOLOGY

The research approach used in this study was a quantitative evaluative research approach. The research design used in this study was quasi-experimental design (i.e.) two group pre and post-test design. The study was conducted at Selected Medical College Hospital, Lucknow. It consists of all patients admitted with COPD. The sample size for this study was 600 between the age group of 35 – 75 years. Samples were selected based on the purposive sampling technique

DATA ANALYSIS AND INTERPRETATION

Table .1 Assess the pretest and post-test level of measurements by using COPDquestionnaire in both experimental and control groups.

Description	**Experimental group**				**Control Group**			
	Pre test		**Post test**		**Pre test**		**Post test**	
COPD	f	%	f	%	f	%	f	%
Mild	0	0	220	73.33	0	0.00	0	0.00
Moderate	140	46.67	80	26.67	150	50.00	170	56.67
Severe	160	53.33	0	0.00	150	50.00	130	43.33

Table .2 Assess the pretest and post test level of measurements by using modified dyspnoea borg scale in both experimental and control group.

Description	Experimental group				Control Group			
	Pre test		Post test		Pre test		Post test	
MDBS	f	%	f	%	f	%	f	%
Mild	0	0.00	170	56.67	0	0.00	0	0.00
Moderate	100	33.33	130	43.33	120	40.00	180	60.00
Severe	200	66.67	0	0.00	180	60.00	120	40.00

Table .3 Assess the pre test and post test level of measurements by using spirometer inboth experimental and control groups.

Description	Experimental group				Control Group			
	Pre test		Post test		Pre test		Post test	
Spirometer	f	%	f	%	f	%	f	%
Mild	0	0.00	130	43.33	0	0.00	0	0.00
Moderate	130	43.33	170	56.67	144	46.67	80	26.67
Severe	170	56.67	0	0.00	165	53.33	220	73.33

Table .4 Assess the pretest and post test level of measurements by using breath holdingtime by stop clock in both experimental and control group.

Description	Experimental group				Control Group			
	Pre test		Post test		Pre test		Post test	
Breath Holding time	f	%	f	%	f	%	f	%
Mild	120	40.00	19	100	33.33	0.00	60	20.00
Moderate	180	60.00	11	200	66.67	46.67	240	80.00
Severe	0	0.00	0	0	0.00	53.33	0	0.00

DISCUSSION

To assess the pulmonary functional parameters among patients with COPD.

This study reveals that 53.33% were experimental severe 46.67% were experimental moderate and 26.67% experienced moderate and 73.33% experienced mild. The study findings were congruent with the study Ana SM Afonso 2011. The study findings showed that the prevalence was 3.02%.

CONCLUSION

These findings will serve as a baseline to assess the effectiveness of interventional package on pulmonary functional parameters among patients with chronic obstructive pulmonary disease.

REFERENCES

1. Singh D, Agusti A, Anzueto A et al. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease: the GOLD science committee report 2019. Eur Respir J. 2019 May; 53(5)
2. Dong-Churl Suh, Helen Lau, Hyen-Oh La, In-sun Choi & Gregory P. Geba (2010) Association between incidence of acute exacerbation and medication therapy in patients with COPD, Current Medical Research and Opinion, 26:2, 297-306, DOI: 10.1185/03007990903465926
3. Afonso AS, Verhamme KM, Sturkenboom MC, Brusselle GG. COPD in the general population: prevalence, incidence and survival. Respir Med. 2011 Dec;105(12):1872-84. Doi: 10.1016/j.rmed.2011.06.012. Epub 2011 Aug 17. PMID: 21852081.